Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	**Applicant(s)**
Office Action Summary	10/651,691	HADA ET AL.
	Examiner	**Art Unit**	
	Dangelino N. Gortayo	2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>30 August 2006</u>.

2a)☒ This action is **FINAL.** 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-37</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-37</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>13 December 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This Office Action is response to Applicants' Amendment filed 8/30/2006.

2.   Claims 1-37 are pending in this application.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 1-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Damiani

et al. ("A Fine Grained Access Control System for XML Documents", Published May

2002 in "ACM Transactions on Information and System Security", Vol. 5, No. 2, Pages

169-202).

As per claim 1, Damiani teaches "A method for controlling access to structured

documents" (see Introduction, pg. 171)

"a) providing an access control policy for a structured document comprising a

plurality of nodes, wherein the access control policy comprises a plurality of access

control rules;" (pg. 183, section 5.1 "Basic Features of the Access Authorizations",

wherein access authorization rules determine whether a user has access to objects)

"b) generating a path for each of the plurality of nodes in the structured

document;" (pg. 174, Example 2.1 and Figure 1(a), wherein the DTD of an XML

document shows path information)

"and c) generating value expression for each path based on at least one of the plurality of access control rules," (pg. 186, Section 5.2 "Access Authorization" and Figure 5, wherein access authorizations express the requirement of access for each path of the object) "wherein the value expression is an executable statement utilized during access control evaluation to determine whether a user is allowed to access a node in the structured document." (pg. 186, Example 5.1, Figure 5, and Algorithm 6, wherein the "Sign" column indicates the authorization for objects, as indicated by a path expression, that a user holds, as indicated in the subject column. A user is given authorization after Algorithm 6 is executed, determining the view returned to a given user accessing an object)

As per claim 2, Damiani teaches "the value expression indicates who is granted or denied access to the corresponding path associated with the node." (pg. 186, Example 5.1 and Figure 5, wherein the "Sign" column of the access authorization table indicates the subjects who are granted or denied access to each path expression associated with an object)

As per claim 3, Damiani teaches "(d) storing each path and the corresponding value expression in a table." (pg. 186, Figure 5, wherein the access authorizations are kept in a table)

As per claim 4, Damiani teaches "(e) compiling each value expression prior to storing step (d)" (pg. 186, Example 5.1, wherein each access authorization is compiled and collected prior to placement in the table)

As per claim 5, <u>Damiani</u> teaches "(f) receiving a query from a user, wherein the query requests access to a node in the document;" (pg. 192, Example 6.1 lines 1-4, wherein a query from a user is received) "(g) executing the query;" (pg. 192, Example 6.1 lines 6-8, wherein the query is executed) "(h) evaluating the value expression corresponding to the path associated with the requested node;" (pg. 187, section 6.1 "Document Tree Labeling" and Figure 8, wherein the requested object's access authorization is examined and evaluated compared to the user id) "(i) displaying data associated with the requested node if the value expression grants access to the user;" (pg. 192, Example 6.1 lines 14-21 and Figure 9(a) and 9(b), wherein the data is displayed showing accessible objects) "and (j) hiding data associated with the requested node if the value expression denies access to the user." (pg. 192, Example 6.1 lines 14-21 and Figure 9(a) and 9(b), wherein the data is displayed hiding denied objects)

As per claim 6, <u>Damiani</u> teaches "the evaluating step (h) is performed during a run time." (pg. 188, section 6.1"Document Tree Labeling", wherein the authorizations' behavior varies from different requesters at runtime)

As per claim 7, <u>Damiani</u> teaches "wherein generating step (c) further comprises: (c1) normalizing each of the access control rules into a format comprising a head, a path and a condition, wherein the condition indicates who is granted or denied access to the path and under what circumstances;" (pg. 186, Example 5.1 and Figure 5, wherein the access authorization includes a subject, a path expression and a sign that indicated the condition) "(c2) propagating each of the plurality of access control rules through

each path such that access to each path is defined by at least one access control rule;"

(pg. 183, section 5.1 "Basic Features of the Access Authorizations" paragraph 2,

wherein the authorizations can be recursive, propagating through the paths) "and (c3)

transforming each of the at least one access control rules affecting each path into a

statement indicating who is granted and denied access to the path. (pg. 183, section 5.1

"Basic Features of the Access Authorizations" paragraph 3, wherein the authorizations

are indicative of who is granted or denied access, including groups)

As per claim 8, Damiani teaches "(e) replacing the value expression for a path

associated with a node with a reference notation if the value expression is identical to

that for a path associated with the node's parent, thereby eliminating repeated value

expressions in the table." (pg. 183, section 5.1 "Basic Features of the Access

Authorizations" paragraph 2 lines 9-13, wherein recursive propagation of the

authorizations applies to all descendant objects until overridden by a conflicting sign)

As per claim 9, Damiani teaches "the providing step (a) comprises: (a1) writing

the plurality of access control rules; and (a2) validating the plurality of access control

rules such that the resulting rules are syntactically and logically valid." (pg. 180, section

4 "Authorization Objects", wherein the authorizations are written and validated)

As per claim 10, Damiani teaches "the structured document is written in

Extensible Markup Language. (pg. 176 paragraph 2 and Figures 1-2, wherein

documents are in XML format)

As per claim 11, <u>Damiani</u> teaches "A computer readable medium encoded with

a computer program for controlling access to a structured document" (see Introduction,

pg. 171). For the remaining steps of this claim applicant(s) is/are directed to the remarks

and discussions made in claim 1 above.

As per claims 12-20, these claims teach the limitations covering the same

grounds as rejected claims 2-10, as discussed above, and are similarly rejected.

As per claim 21, <u>Damiani</u> teaches "A computer system for controlling access to

a structured document," (see Introduction, pg. 171)

"a database management system implemented on the computer system, the

database management system comprising" (pg. 199, section 8.3 "The Java

Implementation")

"an access control policy for a structured document, wherein the structured

document comprises a plurality of nodes and the access control policy comprises a

plurality of access control rules," (pg. 183, section 5.1 "Basic Features of the Access

Authorizations", wherein access authorization rules determine whether a user has

access to objects)

"and an access control mechanism configured to: generate a path for each of the

plurality of nodes in the structured document" (pg. 174, Example 2.1 and Figure 1(a),

wherein the DTD of an XML document shows path information)

"and generate a value expression for each path based on at least one of the

plurality of access control rules," (pg. 186, Section 5.2 "Access Authorization" and

Figure 5, wherein access authorizations express the requirement of access for each

path of the object)

"wherein the value expression is an executable statement utilized by the

database management system during access control evaluation to determine whether a

user is allowed to access a node in the structured document." (pg. 186, Example 5.1,

Figure 5, and Algorithm 6, wherein the "Sign" column indicates the authorization for

objects, as indicated by a path expression, that a user holds, as indicated in the subject

column. A user is given authorization after Algorithm 6 is executed, determining the

view returned to a given user accessing an object)

As per claim 22, <u>Damiani</u> teaches "the value expression indicates who is

granted or denied access to the corresponding path associated with the node." (pg. 186,

Example 5.1 and Figure 5, wherein the "Sign" column of the access authorization table

indicates the subjects who are granted or denied access to each path expression

associated with an object)

As per claim 23, <u>Damiani</u> teaches " the Access Control mechanism is configured

to store each path and the corresponding value expression in a table." (pg. 186, Figure

5, wherein the access authorizations are kept in a table)

As per claim 24, <u>Damiani</u> teaches "a compiler configured to compile each value

expression prior to storage of the value expression in the table." (pg. 186, Example 5.1,

and Algorithm 6, wherein each access authorization is compiled and collected prior to

placement in the table)

As per claim 25, Damiani teaches "the database management system is

configured to receive a query from a user, wherein the query requests access to a node

in the document," (pg. 192, Example 6.1 lines 1-4, wherein a query from a user is

received) "to execute the query," (pg. 192, Example 6.1 lines 6-8, wherein the query is

executed) "to evaluate the value expression corresponding to the path associated with

the requested node," (pg. 187, section 6.1 "Document Tree Labeling" and Figure 8,

wherein the requested object's access authorization is examined and evaluated

compared to the user id) "to display data associated with the requested node if the

value expression grants access to the user," (pg. 192, Example 6.1 lines 14-21 and

Figure 9(a) and 9(b), wherein the data is displayed showing accessible objects) "and to

hide data associated with the requested node if the value expression denies access to

the user." (pg. 192, Example 6.1 lines 14-21 and Figure 9(a) and 9(b), wherein the data

is displayed hiding the denied objects)

As per claim 26, Damiani teaches "access control evaluation is performed

during a run time." (pg. 188, section 6.1"Document Tree Labeling", wherein the

authorizations' behavior varies from different requesters at runtime)

As per claim 27, Damiani teaches "a translator for normalizing each of the

access control rules into a format comprising a head, a path and a condition, wherein

the condition indicates who is granted or denied access to the path," (pg. 186, Example

5.1 and Figure 5, wherein the access authorization includes a subject, a path

expression and a sign that indicated the condition) "and for propagating each of the

plurality of access control rules through each path such that access to each path is

defined by at least one access control rule;" (pg. 183, section 5.1 "Basic Features of the

Access Authorizations" paragraph 2, wherein the authorizations can be recursive,

propagating through the paths) "and a value expression generator for transforming each

of the at least one access control rules associated with each path into a statement

indicating who is granted and denied access to the path." (pg. 183, section 5.1 "Basic

Features of the Access Authorizations" paragraph 3, wherein the authorizations are

indicative of who is granted or denied access, including groups)

As per claim 28, <u>Damiani</u> teaches "the access control rules are syntactically and

logically valid." (pg. 180, section 4 "Authorization Objects", wherein the authorizations

use a standard language, XPath, for validation)

As per claim 29, <u>Damiani</u> teaches "the structured document is written in

Extensible Markup Language." (pg. 176 paragraph 2 and Figures 1-2, wherein

documents are in XML format)

As per claim 30, <u>Damiani</u> teaches "A method for controlling access to structured

documents" (see Introduction, pg. 171)

"a) providing an access control policy for a structured document comprising a

plurality of nodes, wherein the access control policy comprises a plurality of access

control rules;" (pg. 183, section 5.1 "Basic Features of the Access Authorizations",

wherein access authorization rules determine whether a user has access to objects)

"b) generating a path for each of the plurality of nodes in the structured document;" (pg. 174, Example 2.1 and Figure 1(a), wherein the DTD of an XML document shows path information)

"and c) generating value expression for each path based on at least one of the plurality of access control rules," (pg. 186, Section 5.2 "Access Authorization" and Figure 5, wherein access authorizations express the requirement of access for each path of the object) "wherein the value expression is an executable statement utilized during access control evaluation to determine whether a user is allowed to access a node in the structured document." (pg. 186, Example 5.1, Figure 5, and Algorithm 6, wherein the "Sign" column indicates the authorization for objects, as indicated by a path expression, that a user holds, as indicated in the subject column. A user is given authorization after Algorithm 6 is executed, determining the view returned to a given user accessing an object)

"and (d) storing each path and the corresponding value expression in a table;" (pg. 186, Figure 5, wherein the access authorizations are kept in a table) "wherein the corresponding value expression is utilized during access control evaluation to determine whether a user is allowed to access a node in the structured document." (pg. 186, Example 5.1, Figure 5, Algorithm 6, wherein the "Sign" column indicates the subjects who are granted access to each path expression associated with an object, used in the evaluation of views directed at a user)

As per claim 31, <u>Damiani</u> teaches "(e) receiving a query from a user, wherein the query requests access to a node in the document;" (pg. 192, Example 6.1 lines 1-4, wherein a query from a user is received)

· "(f) executing the query;" (pg. 192, Example 6.1 lines 6-8, wherein the query is executed)

"(g) evaluating the value expression corresponding to the path associated with the requested node during a run time;" (pg. 187, section 6.1 "Document Tree Labeling" and Figure 8, wherein the requested object's access authorization is examined and evaluated compared to the user id)

"(h) displaying data associated with the requested node if the value expression grants access to the user;" (pg. 192, Example 6.1 lines 14-21 and Figure 9(a) and 9(b), wherein the data is displayed showing accessible objects)

"and (i) hiding data associated with the requested node if the value expression denies access to the user." (pg. 192, Example 6.1 lines 14-21 and Figure 9(a) and 9(b), wherein the data is displayed hiding denied objects)

As per claim 32, <u>Damiani</u> teaches "generating step (c) further comprises: (c1) normalizing each of the access control rules into a format comprising a head, a path and a condition, wherein the condition indicates who is granted or denied access to the path and under what circumstances;" (pg. 186, Example 5.1 and Figure 5, wherein the access authorization includes a subject, a path expression and a sign that indicated the condition)

"(c2) propagating each of the plurality of access control rules through each path

such that access to each path is defined by at least one access control rule;" (pg. 183,

section 5.1 "Basic Features of the Access Authorizations" paragraph 2, wherein the

authorizations can be recursive, propagating through the paths)

"and (c3) transforming each of the at least one access control rules affecting

each path into a statement indicating who is granted and denied access to the path."

(pg. 183, section 5.1 "Basic Features of the Access Authorizations" paragraph 3,

wherein the authorizations are indicative of who is granted or denied access, including

groups)

. **As per claim 33**, Damiani teaches "A computer readable medium containing

programming instructions for providing path-level access control to a structured

document in a collection stored in a database, wherein the structured document

comprises a plurality of nodes," (see Introduction, pg. 171). For the remaining steps of

this claim applicant(s) is/are directed to the remarks and discussions made in claim 30

above.

As per claims 34-35, these claims teach the limitations covering the same

grounds as rejected claims 31-32, as discussed above, and are similarly rejected.

As per claim 36, Damiani teaches "A method for controlling access to structured

documents" (see Introduction, pg. 171)

"a) providing an access control policy for a structured document comprising a

plurality of nodes, wherein the access control policy comprises a plurality of access

control rules;" (pg. 183, section 5.1 "Basic Features of the Access Authorizations",

wherein access authorization rules determine whether a user has access to objects)

"b) generating a path for each of the plurality of nodes in the structured

document;" (pg. 174, Example 2.1 and Figure 1(a), wherein the DTD of an XML

document shows path information)

"and c) generating value expression for each path based on at least one of the

plurality of access control rules," (pg. 186, Section 5.2 "Access Authorization" and

Figure 5, wherein access authorizations express the requirement of access for each

path of the object)

"wherein the generating step comprising: (c1) normalizing each of the access

control rules into a format comprising a head, a path and a condition, wherein the

condition indicates who is granted or denied access to the path and under what

circumstances;" (pg. 186, Example 5.1 and Figure 5, wherein the access authorization

includes a subject, a path expression and a sign that indicated the condition) "(c2)

propagating each of the plurality of access control rules through each path such that

access to each path is defined by at least one access control rule;" (pg. 183, section 5.1

"Basic Features of the Access Authorizations" paragraph 2, wherein the authorizations

can be recursive, propagating through the paths) "and (c3) transforming each of the at

least one access control rules affecting each path into a statement indicating who is

granted and denied access to the path;" (pg. 183, section 5.1 "Basic Features of the

Access Authorizations" paragraph 3, wherein the authorizations are indicative of who is granted or denied access, including groups)

"and (d) storing each path and the corresponding value expression in a table;" (pg. 186, Figure 5, wherein the access authorizations are kept in a table) "wherein the corresponding value expression is utilized during access control evaluation to determine whether a user is allowed to access a node in the structured document." (pg. 186, Example 5.1, Figure 5, Algorithm 6, wherein the "Sign" column indicates the subjects who are granted access to each path expression associated with an object, used in the evaluation of views directed at a user)

"wherein the value expression is an executable statement utilized during access control evaluation to determine whether a user is allowed to access a node in the structured document." (pg. 186, Example 5.1, Figure 5, and Algorithm 6, wherein the "Sign" column indicates the authorization for objects, as indicated by a path expression, that a user holds, as indicated in the subject column. A user is given authorization after Algorithm 6 is executed, determining the view returned to a given user accessing an object)

As per claim 37, <u>Damiani</u> teaches "A computer readable medium containing programming instructions for providing path-level access control to a structured document in a collection stored in a database, wherein the structured document comprises a plurality of nodes" (see Introduction, pg. 171). For the remaining steps of

this claim applicant(s) is/are directed to the remarks and discussions made in claim 36 above.

Response to Arguments

5.   Applicant's amendment, see page 16, filed 8/30/2006, with respect to the objection to the claims have been fully considered and are persuasive. The objection to the claims has been withdrawn.

6.   Applicant's amendment, see page 17, filed 8/30/2006, with respect to the objection to the specification have been fully considered and are persuasive. The objection to the claims have been withdrawn.

7.   Applicant's amendment, see page 17, filed 8/30/2006, with respect to the rejection of claims 11-29, 33-35, and 37 under 35 USC 101 have been fully considered and are persuasive. The rejection of claims 11-29, 33-35, and 37 under 35 USC 101 has been withdrawn.

8.   Applicant's arguments with respect to the 35 USC 102(b) rejection of claims 1-37 have been fully considered but they are not persuasive.

   a.   Applicant's argument is stated as Damiani does not disclose that the "access authorization" is an executable statement.

           In response to the argument, Examiner respectfully disagrees. In the Damiani reference, the access authorization is provided by an access authorization made up of a subject, object, action, sign, and type columns. When a client wishes to access an object, the path expression is read from the table.

Using Algorithm 6 on page 189, the computer view reads in the data from the

access authorization table to determine the view to be returned to a user. The

sign indicates a denial or allowance of access by a subject to an object indicated

by the path expression. The data from the access authorization table is read in to

be executed by the algorithm, and resembles an executable statement.

Therefore, Damiani teaches that "access authorization" is an executable

statement.

b.   Applicant's argument is stated as Damiani discloses an access

authorization as both a value expression and the access control rule recited in

claim 1, and cannot be construed as disclosing both elements of claim 1.

In response to the argument, Examiner respectfully disagrees. As outlined

above, the value expression is disclosed in Damiani is being composed of the

subject and sign column of the table, which are read into an algorithm to

determine the view given to a user, based on access authorization. The access

authorization table controls the access control policy of the system, and within

the access authorization table, each row represents an access control rule each

subject, or client, follows with respect to access authorization. The value

expression is disclosed above to be the individual data points within the table,

while the access control rule is disclosed to be a row of the access authorization

table determining access rules for a subject. Therefore, Damiani discloses the

access authorization table being an access control policy of claim 1, composed

of rows of access control rules and containing value expressions to be executed

by an algorithm to determine access authorization.

Conclusion

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dangelino N. Gortayo whose telephone number is

(571)272-7204. The examiner can normally be reached on M-F 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tim T. Vo can be reached on (571)272-3642. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dangelino N. Gortayo   Tim T. Vo
Examiner   SPE

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